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	1	50
Zm-POX01	(1)	-----
Zm-POX04	(1)	-----QLSPTFYASSCPNLSIVRAAMTQAVASEQRM
Zm-POX05	(1)	-----TVTVNEPIANGLSWSFYDVSCPSVEGIVRWHVAEALRRDIGT
Zm-POX06	(1)	ASSAAHGYGYGGDAAAEALRVGFYKDSCPDAEAVVRRIVAKAVREDPTA
Zm-POX07	(1)	-----GLLESNPGLAYNFYKNSCPSVDSIVRSVTWAQVAANPAL
Zm-POX08	(1)	-----SPPGKLEVGFYEHSCPAEDIVRNAVRRGIAREPGV
Zm-POX10	(1)	-----AVRELKVGYYAEICPEAEDIVRETMARARAREARS
Zm-POX16	(1)	-----QLSSTFYDTSCPSAMSTISSGVNSAVAQQARV
Zm-POX17	(1)	-----QLKEGFYDYSCPAEKIVKDYVKAHTPHAPDV
Zm-POX18	(1)	-----AGAAGLDMNFYGSTCPRVEAIVKEEMVATLKAAPT
Zm-POX20	(1)	-----QLTADYDCTCPDAYNIVKQVLEIAHKSVDRI
Zm-POX21	(1)	---RPVLTPLGTSRPAAGDLSVYFHADSCPQLETIVRSSVDAALQQNVRL
Zm-POX24	(1)	-----QLSPTFYDSSCPNALSTIKSAVNAAVQKENRM
Zm-POX26	(1)	-----QLRVGFYDSSCPAAEIIIVQQEVSRAVAANPGL
Zm-POX28	(1)	-----QLRQNYGSSCPSAESTVRSVTSORLQQSFAV
Zm-POX31	(1)	----AHGYGAYGYGDAAAEALRVGFYKDSCPDAEAVVRRIVAKAVQEDPTA
Zm-POX34	(1)	-----QLKEGFYDYSCPAEKIVKDYVKAHTPHAPDV
Zm-POX37	(1)	-----GLTAQLRQDYAAVCPDLESIVRAAVSKKVQAQPVA
Consensus	(1)	QL FY SCP AESIVR V AV P V
	51	100
Zm-POX01	(1)	-----
Zm-POX04	(33)	GASLLRLFFHDCFVQGCDSITLLDAGG-----EKTAGPNLNSVRGFV
Zm-POX05	(43)	AAGLIRIFFHDCFPQGCDAVLLSGSN----SEQIEVPNOTLRPEALKI
Zm-POX06	(51)	NAPLLRLHFHDCFVRGCDGSVLVNSTRGNT--AEKDAKPN-HT-LDAFDV
Zm-POX07	(40)	PARLLRLHFHDCFVKGCDASITLLDTAQ----SEKTAAPN-LS-VGGYEV
Zm-POX08	(37)	GAGLIRMHFHDCFVRGCDGSITLNTSTPDNK--AEKDSVANNPS-MRGFDV
Zm-POX10	(36)	VASVMRLQFHDCFVNGCDGSVLMDATPTMPG--EKDALSNINS-LRSFEV
Zm-POX16	(33)	GASLLRLHFHDCFVQGCDAITLLNDTS----GEQTQPPNLTNLNPRAFDV
Zm-POX17	(33)	ASTLLRTHFHDCFVRGCDASVLLNATGGSE--AEKDAAPN-LT-LRGFGF
Zm-POX18	(37)	AGPLLRLHFHDCFVRGCDASVLLDSTPTST--AEKDATPN-LT-LRGFGS
Zm-POX20	(33)	YASLTCLHFHDCFVQGCDSVLLDAVPGVANSTEKLAPANNNNS-ARGFPV
Zm-POX21	(48)	TAGLLRLLFHDCFPQGCDAITLLDNG-----ERGLPPNVGLQQEAQVL
Zm-POX24	(33)	GASLLRLHFHDCFVQGCDAVLLADNAATGFTGEQGAAPNAGS-LRGFDV
Zm-POX26	(33)	AAGLLRLHFHDCFVGGCDASVLTIDSTKGNT--AEKDAGPN-LS-LRGFEV
Zm-POX28	(33)	CPGTLRLFFHDCFVRGCDASVLMAP---NGDDESHSGADATLSPDAVDA
Zm-POX31	(47)	NAPLLRLHFHDCFVRGCDGSVLVNSTRGNT--AEKDAKPN-HT-LDAFDV
Zm-POX34	(33)	ASTLLRTHFHDCFVRGCDASVLLNATGGSE--AEKDAAPN-LT-LRGFGF
Zm-POX37	(37)	VGATIRLFFHDCFVEGCDASVILVSTG--NNTAEKDHPSNLSLAGDGFD
Consensus	(51)	AA LLRLHFHDCFV GCDASVLL AT AEKDA PN S LRGFDV

FIG 1A

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		101		150
Zm-POX01	(1)	-----MSCCMQGG-----		GPA
Zm-POX04	(76)	IDTIKRNVEAA--CPGVVSCADILALAARDGTNLLG-----		GPT
Zm-POX05	(88)	IDDI RAAV HAV--CGPTVSCADITTLATRD AV VASG-----		GPF
Zm-POX06	(97)	IDDIKEALEKR--CPGTVSCADILATAARD AV SLATKVVTKGGWSRDGNL		ASL
Zm-POX07	(83)	IDAIIKAQLERA--CPGVVSCADIV ALA AARD AV SYQFK-----		GLD
Zm-POX08	(84)	V DDAKAVLEAH--CPRTVSCADIV AFA AARD SAY LAG-----		GPN
Zm-POX10	(83)	V DEIKDALEER--CPGVVSCADIV I MAARD AV VLTG-----		GPS
Zm-POX16	(78)	V NSIKAQVEAA--CPGVVSCADILAV A AARDGVVALG-----		GPF
Zm-POX17	(79)	IDRIKALLEKE--CPGVVSCADIV ALA AARD SV GVIG-----		GPS
Zm-POX18	(83)	V QRV K DRLEEA--CPGNVSCAD V LALMARD AV VLAN-----		GPK
Zm-POX20	(82)	V DKVKA A LEDA--CPGVVSCADILALAAEI S VELSG-----		GPS
Zm-POX21	(91)	V EDIRGKVHAA--CGPTVSCADITVLATRD AV SLSG-----		GPS
Zm-POX24	(82)	IANIKAQVEAV--CKQTVSCADILAV A AARD SV VALG-----		GNA
Zm-POX26	(79)	V DRIKARVEQA--CFGVVSCADILAF A AARD S VALAG-----		GPS
Zm-POX28	(80)	INKAKAAVEALPGCAGKVSCADILAMAARD V VSLG-----		GPF
Zm-POX31	(93)	IDDIKEALEKR--CPGTVSCADILATAARD AV SLATKVVTKGGWSRDGNL		GPS
Zm-POX34	(79)	IDRIKALLEKE--CPGVVSCADIV ALA AARD SV GVIG-----		GPS
Zm-POX37	(85)	V IQAKAAVD AV PACANQVSCADILALATRD V TEL AG -----		GP
Consensus	(101)	ID IKA LE CPG VSCADILALAARDAV LAG		

		151		200
Zm-POX01	(12)	Y KLPLGRRDGLAPASNAAVLAALPPPTS K PTLLSFLAKI-NLDVTDLVA		
Zm-POX04	(113)	WSVPLGRRDSTTASASLANS-NPPPPTASLGTLLISLFGRO-GLSPRDMTA		
Zm-POX05	(125)	FEVPLGRRDGLAPASSDLVG-TLPAPFFDVPTLIESFKNR-SLDKADLVA		
Zm-POX06	(145)	Y QVETGRRDGRVSR A EAVK-NLPDSMDGTRKLT IR RFASK-NLSVKDLAV		
Zm-POX07	(121)	WQVETGRRDGTVSLASNTG--ALPSPFAGFAGLLQSFS D R-GLNLTDLVA		
Zm-POX08	(121)	Y KVPSGRRDGRVSKED V LDNNVPAPTDE V DELIESFKRK-GLNADD M VT		
Zm-POX10	(120)	WEVRLG- R EDSMTASQEDADNIMPSPRANASALIRLFAGL-NLSVTDLVA		
Zm-POX16	(115)	WTVLLGRRDS-TGSFSPQTS-DLPPPTSS L QALLAAYS K K-NLDATDMVA		
Zm-POX17	(116)	WSVPTGRRDGTVSIKQ E ALD-QTPAPTMNFTQLLQSFONK-SLNLADLVW		
Zm-POX18	(120)	WPVALGRRYGRVSLANETN--QLPPPTANFTRLVSMFAAK-GLSV R DLVV		
Zm-POX20	(119)	WAVLLG-RLDSKKADFKSAENLP-SPFDNLTVLEQKFAAV-GLHTVDLVA		
Zm-POX21	(128)	F TVPLGR L DSAAPASSNDVF-TLPPPTATVDELLTAFGSKNLSDPADLVA		
Zm-POX24	(119)	WTVPLGRRDSTTASLSLANS-DLPPPPFNLGOLITAFGNK-GFTAT E MT		
Zm-POX26	(116)	Y QVPAGRRDGSVSRASDTNG-NLPPPTANVAOLITQIFGTK-GLTQK E MI		
Zm-POX28	(119)	Y GVELGR L DGKTFNRAIVKH-VLPGPGFNLDQNLALFAQN-GLTQ T DMIA		
Zm-POX31	(141)	Y QVETGRRDGRVSR A EAVK-NLPDSMDGTRKLT IR RFASK-NLSVKDLAV		
Zm-POX34	(116)	WSVPTGRRDGTVSIKQ E ALD-QTPAPTMNFTQLLQSFONK-SLNLADLVW		
Zm-POX37	(124)	V AVELGR L DGLVSMSTNVDG-KLPPPSFNLDQ L TSIFALN-NLSQAD M IA		
Consensus	(151)	W VPLGRRDG VS A E LP PT NL LI FA K LS DLVA		

FIG 1B

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201
Zm-POX01 (61) LSGGHTVGVIAHC1GSFDNRLEP-----TQDPTLNKFFAGOLYRTCP2TN
Zm-POX04 (161) LSGAHTIGQARCTTFRGRITYG-----DTDINASFAALRQOTCP3PRS
Zm-POX05 (173) LSGAHTVGRGHCVSFS4DRLLPP-----NADDGTMDPAFRQRLTAKCASD
Zm-POX06 (193) LSGAHAIGKSH5CPSIAKRLRNFTAHR---DSDPTLDGAYAAELRRQCRSR
Zm-POX07 (168) LSGAHTIGVAS6CSSVTPRLYQGNASS---VDPLLD7SAYARTLMSSCPNP
Zm-POX08 (170) LSGAHTIGRSH8CSSFTIRLYNFSGQLG--RTDPSLD9PAYAEHLKMRCPWP
Zm-POX10 (168) LSGSHSIGEAR10CFSIVFRLYNQSGSG--RPDPHMD11TAYRRSLDALCPKG
Zm-POX16 (162) LSGAHTIGQA12CSSFN13GHITYN-----DTNINAA14FATSLKANCPMS
Zm-POX17 (164) LSGAHTIGIS15OCNSF16ERLYNFTGRGGPDDADPSLD17PLYAAKRLRKCKTL
Zm-POX18 (167) LSGGHTLGT18AHCNLFSDRLYNFTGANS19LADVPALDAAYLARLSRCSRSL
Zm-POX20 (166) LSGAHTFGRV20QCQFVTGRLYNFSGTN--RPDPTLNS21GYRAFLAQRCPQN
Zm-POX21 (177) LSGAHTV22GKARC23SSFGDVAGP-----ATDDVTR-----CVTATCSAP
Zm-POX24 (167) LSGAHTIGQA24CCKNFRDHIYN-----DTNINQ25GFASSLKANCPRP
Zm-POX26 (164) LSGAHTIGSS26HCSSFS27GRLSGSATTAG--GQDPTMD28PAYVAQLARQCPQG
Zm-POX28 (167) LSGAHTIGVTH29CDKFVRRITYTFKQ--RLAWNPP30MNLD31FLRSLRRVCPLS
Zm-POX31 (189) LSGAHAIGKSH32CPSIAKRLRNFTAHR---DSDPTLD33GAYAAELRRQCRRR
Zm-POX34 (164) LSGAHTIGIS34OCNSF35ERLYNFTGRGGPDDADPSLD36PLYAAKRLRKCKTL
Zm-POX37 (172) LSAHTVGVFAHC37STFS38DRITQ-----PQSVDP39TMNATYAEDLQAACPAG
Consensus (201) LSGAHTIG AHC SFS RLYN G DPTLD AYAA LR CP

251
Zm-POX01 (103) AT----VNTTANDVRTPN40AFDNKYYVDLLNREG---LFTSDQD41LLTN--
Zm-POX04 (201) GGDG---NLAP42TDVQTPVR43EDTAYETNLLSRRG---LFHSDQEL44FNNG--
Zm-POX05 (216) PSGN---VVTQVL45DVRTPN46AFDNKYYFDL47LAKQG---LFKSDQGL48TNHP-
Zm-POX06 (240) RD---NTTELE49MVPG50SS51TAFGT52AYYGLVAERRA---LFHSD53EALLRN--
Zm-POX07 (214) SP---ASATVALDGG54TPFR55EDSSYYSRVQOKQG---TLASDA56AALAQN--
Zm-POX08 (218) SSNDQMDPT57VVPLDPVTPAT58FDNQYYKNVLAHKV---LFI59SDNTLLEN--
Zm-POX10 (215) GD---EEVTGGLD-ATPRV60FDNQYFEDL61VALRG---FLNSDQ62TIFSD--
Zm-POX16 (202) GGS----SLAPLD63TMTPTV64FDNDYYKNLLSOKG---LLHSDQEL65FNFN--
Zm-POX17 (214) TD---NTTIVEM66DPGS67FR68TFDLSYYRGV69LKRRG---LFQSDA70AALITD--
Zm-POX18 (217) AD---NTTLNEM71DPGS72FLS73FDSSYYSLVARRRG---LFHSDA74AALLTD--
Zm-POX20 (213) GS---PSALNDL75DPTTPN76LFDNHYYTNLEVNRG---FLGSDQEL77KSAPOQ
Zm-POX21 (214) GSG---DTLRDL78DFLTPAV79FDNLYFVELTL80RKNKGVM81LP82SDQGLVSDP-
Zm-POX24 (207) TGSGD--GNLAPLD83TTPYS84FDNAYYSNLLSOKG---LLHSDQEL85FNNG--
Zm-POX26 (212) G-----DPLVPM86DYVSPNA87FDEGHYKGVMSNRG---LLSSDQALL88SD--
Zm-POX28 (214) YSP---TAFAMLD89VTTPRV90FDNAYENNLRYNKG---LLASDQV91LFTDR-
Zm-POX31 (236) RD---NTTELE92MVPG93SS94TAFGT95AYYGLVAERRA---LFHSD96EALLRN--
Zm-POX34 (214) TD---NTTIVEM97DPGS98FR99TFDLSYYRGV100LKRRG---LFQSDA101AALITD--
Zm-POX37 (215) VDP---NIALQLD102PVTPQAF103DNQYFANLVDGRG---LFASDQV104LFSDA-
Consensus (251) L LD TP FDNAYY LL RRG LF SDQALLS

300
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FIG 1C

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		301		350
Zm-POX01	(143)	--ATTTRPTVTRFAVD--QDAFFEDQFVYSYVKMGQVNVLTGSQ-GQVRANC		
Zm-POX04	(242)	--GSQDALVROYSA--SASLFNADFVAAMIRMGNVGVLTGTA-GQIRRN		
Zm-POX05	(259)	---DTKRAATRFALN--QAAFFEDQFARSMVKMSQMDILTG-SAGEIRRN		
Zm-POX06	(281)	--GETRALVYRYRDAPSEAPFLADFGASMLNMGRVGVLTGAQ-GEIRKRC		
Zm-POX07	(255)	--AAAAQMVADLTN---PIKFVAAFSSMSMKMGVMDVLTGAN-GQIRKQC		
Zm-POX08	(263)	--PWTAGMVHFNAA--VEKAWQVKFAKAMVKMGKVQVLTGDE-GEIREKC		
Zm-POX10	(255)	-NTRTRRVVERLSK--DQDAFFRAFIEGMIKMGELQ---NPRKGEIRRN		
Zm-POX16	(242)	--GSTDSTVSNEAS--SFGR LHQR LHGHGEDGEPRPAHRDQ-WADQ AHL		
Zm-POX17	(255)	--AASKADILSVIN-APPEVFFQVFAGSMVKMGATEVKTGSE-GEIRKHC		
Zm-POX18	(258)	--PATRAYVQRQATGLFTAEEFRDFADSMVKMSTIDVLTGQQQGEIRKKC		
Zm-POX20	(256)	AQGV TAPVVDQFAT--SQAAFFSSFAQSMINMGNTQPLTDPAKGEVRCDC		
Zm-POX21	(259)	---RTSWLVQGFADN--HWWFFEDQFR TSMIKMSQLRG PQG-NVGEIRRN		
Zm-POX24	(250)	--GSTDNTVRNEAS--NSAAFSSAF AAMVKMG NLSPLTGSQ-GQIRLTC		
Zm-POX26	(251)	--KNTAVQVVTYAN--DPATFQADFAAAMVKMGSGVGVLTGTS-GKVRANC		
Zm-POX28	(256)	---RSRPTVNLEAAN--ATAFY EAFVAAMAKLGRIGLKTG-ADGEIRRV		
Zm-POX31	(277)	--GETRALVYRYRDAPSEAAFLAEFGASMLNMGRVGVLTGAQ-GEIRKRC		
Zm-POX34	(255)	--AASKADILSVIN-APPEVFFQVFAGSMVKMGATEVKTGSE-GEIRKHC		
Zm-POX37	(257)	---RSQPTVVAAQON--ATDFEQAFVDATITRLGRVGVKTDPSLGDVRRDC		
Consensus	(301)	G TR LV FA FF FAAS MVKMG V VLTG GEIRK C		

		351		397
Zm-POX01	(188)	SARNGAAAGDS DLPWSSSVVIETVADAAGSLVL-----		
Zm-POX04	(287)	RVVNS-----		
Zm-POX05	(303)	SVRNTALGDVSSSAQLETTAGDEGLAADA-----		
Zm-POX06	(328)	AFVN-----		
Zm-POX07	(299)	RQVNTS-----		
Zm-POX08	(308)	FAVNPHY-----		
Zm-POX10	(299)	RVANNSPWQPR TGMASGQSTSELR-----		
Zm-POX16	(287)	LEAQLVLIIKDGRI DDPAQSYRTCMIRIHLETTIPMQTEIYTYEYV		
Zm-POX17	(301)	ALVNKH-----		
Zm-POX18	(306)	NLVN-----		
Zm-POX20	(304)	RVANDD-----		
Zm-POX21	(303)	FRPNTNGIAASA-----		
Zm-POX24	(295)	STVN-----		
Zm-POX26	(296)	RVA-----		
Zm-POX28	(300)	TAVN-----		
Zm-POX31	(324)	AFVN-----		
Zm-POX34	(301)	ALVNKH-----		
Zm-POX37	(302)	AFVN-----		
Consensus	(351)	VN		

FIG 1D